CONTENTS

1. Introduction 4

2. Loading Instructions 5

3. Getting Started 6

4. The Commands 10

lock 10
lockoff 11
help1 12
auto 12
discdisc 13
disctape 14
era 14
hcopy 15
header 16
manual 16
pload 17
printon 17
printoff 17
ren 17
speed 18
status 18
tapedisc 19
tapetape 20

5. Getting Programs To Run 21

6. Command Summary 23

(C) BEEBUGSOFT 1985
Dolphin Place, Holywell Hill, St. Albans, Herts.

All rights reserved. No part of this product may be reproduced in whole or part by any means without written permission of the publisher. Unauthorised hiring, renting, loaning, public performance or broadcasting of this product or its constituent parts is prohibited. While every care is taken, the publisher cannot be held responsible for any errors in this product.

1. INTRODUCTION

1.1 Overview

Locksmith is a comprehensive Tape and Disc transfer package specially developed for the CPC 464, CPC 664, and CPC 6128 range of computers, and is available on tape, disc or rom. It will quickly and easily transfer programs from tape to disc, tape to tape, disc to disc, and disc to tape. Locksmith will faithfully transfer tape programs on to disc, but it may also be necessary to alter programs slightly for them to run correctly. Section 5 of this manual gives some notes on how to do this.

For ease of use all Locksmith commands may be entered with a unique command name directly from the keyboard, or they can be selected from a main menu. A special Help command is provided to give the user information on the syntax of all Locksmith commands, and as a further aid, parameters required by the various Locksmith routines are prompted for, if not supplied by the user.

Locksmith should not be used to infringe the copyright laws. Programs transferred by Locksmith are intended for your own personal backup use, and should not be sold, lent or given away.

1.2 Features Of Locksmith

TAPE to DISC transfer.

TAPE to TAPE transfer.

DISC to DISC transfer.

DISC to TAPE transfer.

Tranfer single files or blocks of files.

AUTO and MANUAL modes of operation.

Load and list protected Basic programs.

Comprehensive tape and disc header reader.

Relocator for files that overwrite disc workspace.

Headerless tape files transferred.

HELP command to list the commands and their parameters.

Menu or command driven.

2. LOADING INSTRUCTIONS

2.1 Loading The Tape Version

Insert your cassette into the datacorder ensuring that it is fully rewound. Hold down the CTRL key and press the small ENTER key on the numeric keypad. You will be prompted to press the play button on the datacorder and then press any key on the keyboard. When loading is complete, the familiar 'Ready' message will appear.

If you want to load the cassette version on a CPC 664 or CPC 6128 then you must type |tape before loading. If your tape recorder does not use remote control then remember to stop the recorder when the main program has loaded.

2.2 Loading The Disc Version

Insert the disc into the disc drive and type:

```
run"disc
```

Press ENTER and the program will load. When the 'Ready' message appears, Locksmith is ready for use.

If you have more than one drive connected to your computer then the disc should be inserted into drive A.

2.3 Fitting The Rom Version

If Locksmith is supplied on rom, you will need an external rom board attachment. These may be purchased from a number of suppliers, and you should consult the instructions which accompany your rom socket about its connection to your computer, and the insertion of Locksmith into it. Once fitted in this way, Locksmith will remain on call at all times without the inconvenience of having to load it from tape or disc.

3. GETTING STARTED

3.1 Conventions Used In This Manual

In this manual specific key presses required by Locksmith (such as the 'Enter' key) will be indicated thus: **ENTER** .

All parameters are shown in this manual enclosed in brackets. Single sets of brackets <> indicate essential parameters, while double brackets <<>> indicate optional parameters.

3.2 Memory Used By Locksmith

Tape and disc versions of Locksmith will remain in memory until you switch off your machine, unless they are overwritten in memory by other programs. The rom version will remain on call at all times. Once Locksmith is resident in your machine (whether on rom or in memory), you may use your computer as normal except that where Locksmith has been loaded into memory from tape or disc, less free memory will be available for Basic programs.

Please note that using any of the following Locksmith commands will destroy any Basic program resident in memory:

```
|tapedisc
|tapetape
|discdisc
|disctape
|pload
```

3.3 Calling Locksmith Commands

Whether Locksmith is on rom or has been loaded into memory from cassette or disc as described above, all routines are called in exactly the same way using '|' (bar) commands.

For example if you type the following: |help| **ENTER**
you will see Locksmith's help screen appear.

Although each Locksmith command has a unique command word associated with it, you may find that some of these clash with the names of commands in other roms (if your machine is fitted with an external rom board). Locksmith has a special feature to avoid command name clashes. If any command name clashes, simply preface the command name with a 'b' - for Beebugsoft - (eg type |bhelp| instead of just |help|). This will ensure that the command is intercepted by Locksmith rather than any other rom.

Another way to call a Locksmith command is to type: |lock **ENTER**
This calls a menu from which almost all of Locksmith's routines may be selected.

3.4 Entering Parameters

All Locksmith commands may be entered in upper or lower case, and if parameters are being entered with the command, the command should be followed by a comma, and each parameter separated by a comma. In fact most of Locksmith's routines require one or more parameters to be entered to specify how the commands are to be executed.

For example the tape to disc transfer routine needs to know the name of the file to transfer. This may be entered immediately following the command name as a string enclosed in quotes. Thus, for example, the command !tapedisc which will transfer a file from tape to disc, might be called as follows:

!tapedisc,"oldgame" **ENTER**

In this case the routine will tranfer the file "oldgame" from tape to disc.

If you had selected !tapedisc from the Locksmith menu, or had simply entered:

!tapedisc **ENTER**

Locksmith would have prompted you for the parameter.

3.5 Optional Parameters

Some parameters are optional, such as the filenames used with the !tapedisc command. Optional parameters are indicated in this manual with a double angle bracket thus:

!tapedisc,<<filename>> **ENTER**

If you wish to call the command without the parameters, simply type:

!tapedisc **ENTER**

and then press **ENTER** in response to the prompt that is printed. Locksmith will then automatically supply sensible default parameters; in this case it will transfer all files. Locksmith will supply default values for all commands that have optional parameters.

3.6 Entering Strings On The CPC 464

Quite a few of Locksmith's routines require text (or strings) to be entered as parameters. One such command is |pload ; this routine needs to know the name of the Basic program to load. The correct syntax for this is illustrated by the following example. To load the protected Basic program "utility", you could type the following:

|pload,"utility" ENTER

There is an important point to note here: string parameters may not be entered in a bar command on the CPC 464.

This needs some elaboration. It is feature of the CPC 464 (though not the CPC 664 or the CPC 6128) that strings (ie text) may not be entered in a "|" (or bar) command. So if you have a CPC464 simply enter the command name, and you will be prompted for the parameters. Users of the 664 and 6128 have the option of entering all parameters on the same line as the command name.

By contrast of course, if a Locksmith routine has been called from the main Locksmith menu, there is no opportunity to directly enter any parameters (since you are simply selecting one item from a menu screen), and all parameters will be prompted for regardless of which computer you are using.

3.7 Using Wildcards

Many of Locksmith's disc commands can be used on more than one file at once, by using wildcard characters in the filenames. There are two wildcards available: ? represents any single character, and * represents any number of characters. To give some examples we will use the |header command, which displays file header information for the file specified.

|header,"c?t" ENTER will display header information for the files "cat", "cbt", "cut" etc. but not for the file "cute".

|header,"p*" ENTER will display information for all files beginning with "p".

|header,"*.bas" ENTER will display information for all files with the file type "bas".

|header,"*.*" ENTER will display information for all files.

3.8 The Escape Key

The ESC key may be used at any time to exit a Locksmith routine, or to exit the main Locksmith menu.

It operates exactly as in Amstrad Basic. A single press of the ESC key will halt the screen display, and any other key will reinstate it. Pressing ESC twice will return you to Basic, or back to the menu, if the command you were using was called from there.

3.9 Screen Modes

Locksmith will work in all screen modes, though you will find its output clearest in mode 1. When a Locksmith routine is called individually using a bar command, no changes will be made to the currently selected screen mode or ink and pen colours. If on the other hand you call the Locksmith menu, mode 1 will be selected, and the colour palette will be specifically re-defined in order to obtain the clearest display.

4. THE COMMANDS

In the bulk of this manual, each command is described in alphabetical order. But there are three commands that deserve special attention. These are !lock, !lockoff and !help!.

4.1 LOCK

Syntax : !lock
Function: Display a menu from which Locksmith commands may be selected, and set the function keys for use with Locksmith.

The Locksmith menu provides the easiest way of calling Locksmith commands. When !lock is entered, screen mode 1 is first selected, and then the colour palette adjusted if necessary for a clear display. The following menu then appears:

```
-----------------------------------------

                              A  AUTO
                              B  DISC to DISC
                              C  DISC to TAPE
                              D  ERASE
        L O C K S M I T H     E  HCOPY
                              F  HEADER
          Tape and Disc       G  HELPL
                              H  MANUAL
        Transfer Package      I  PLOAD
                              J  PRINTON
              from            K  PRINTOFF.
                              L  RENAME
        B E E B U G S O F T   M  SPEED
                              N  STATUS
                              O  TAPE to DISC
                              P  TAPE to TAPE
                              Q  RSX Commands

-----------------------------------------
Enter Option:
```

The user selects a routine by letter, or returns to Basic by pressing ESC . If the routine selected requires the entry of parameters, these will be prompted for. When the routine has finished a small cursor block will appear on the screen; press ESC to return to Basic, or any other key to return to the menu.

Option 'Q' allows '|' (bar) commands to be used without leaving the menu. Press any key when the command has executed to return to the menu, or press ESC to return to Basic.

FUNCTION KEYS

Calling !lock will also set the function keys f0 to f9 to the following functions for ease of use:

f0	Set mode 0
f1	Set mode 1
f2	Set mode 2
f3	!status
f4	!help
f5	catalogue drive A
f6	catalogue drive B
f7	!printon
f8	!printoff
f9	!lock

Thus once !lock has been called, the main Locksmith menu can be recalled at any time by pressing the 9 key on the keypad at the right hand side of the keyboard. The other defined keys work in a similar way. Press 1 and you will set up mode 1, and so on.

Also, if you have a disc interface connected, CTRL together with the small ENTER key on the numeric keypad will be defined:

```
run"disc
```

This will automatically 'boot' start discs containing the file 'disc'.

4.2 LOCKOFF

Syntax : !lockoff
Function: Clear Locksmith from memory.

This command is for use on tape and disc versions only, and is used to reclaim space for Basic, should the need ever arise, by clearing Locksmith from memory. The operation leaves resident Basic programs intact. To use Locksmith routines after this command has been used, Locksmith will need to be reloaded into the machine.

As a safety precaution whenever this command is called, the user is asked to confirm his intention before Locksmith is cleared.

4.3 HELPL

Syntax : !helpl
Function: General help pages giving command list, and syntax.

The help command will first give a list of all of Locksmith's keywords, and their syntax. A second page gives the function keys settings described in section 4.1.

```
auto
discdisc,<<filename>>,<<destination drive>>
disctape,<<filename>>
era,<<filename>>
hcopy,<filename>,<<sync byte>>,<<length>>
header,<<filename>>
help1
lock
lockoff
manual
pload,<filename>
printon
printoff
ren,<newname>,<oldname>
speed,<<save speed>>
status
tapedisc,<<filename>>
tapetape,<<filename>>
```

As in this manual itself, essential parameters are enclosed in single angular brackets <>, whilst optional parameters have a double bracket <<>>.

4.4 AUTO

Syntax : !auto
Function: Set automatic mode for tape to disc transfer

This command alters the way that the tape to disc transfer utility !tapedisc operates. It causes two things to happen automatically during the transfer:

1. If the filename of a program being transferred to disc is more than 8 characters long, then it will be truncated to make it legal.

2. A small relocator is added to any file that would otherwise overwrite disc workspace.

For further information please refer to the detailed description of the command !tapedisc described in section 4.17, and see also the command !manual.

4.5 DISCDISC

Syntax : !discdisc,<<filename>>,<<destination drive>>
Function: Transfer files from one disc to another.

This command will transfer files from the source (or default) drive to the destination drive specified. The filename may include wildcard characters (see section 3.7). For example:

```
!discdisc,"program.*","B"  ENTER
```

will transfer all files called "program" with any file type, from the source drive to drive B. The source drive is normally drive A, but can be changed by using the Amsdos command !drive. Alternatively the source drive can be specified at the beginning of the filename. For example:

```
!discdisc,"b:program","A"  ENTER
```

will transfer the file "program" from drive B to drive A.

Both the source and destination drives can be the same, so that users with only one disc drive can easily transfer disc files. In this situation, Locksmith will prompt you to insert your source and destination discs as necessary.

CPC 464 users wishing to use this command should type the command name only; the parameters will then be prompted for. If ENTER is pressed in response to the prompts, then Locksmith will supply the following default values:

```
<filename>              = *.*   (i.e. all files)
<destination drive>     = the same drive as the source drive
```

Please note that this command may overwrite the contents of memory, so make sure you save your current program before using it.

4.6 DISCTAPE

Syntax : !disctape,<<filename>>
Function: Transfer files from disc to tape.

This command will transfer files from the source (or default) drive to tape. The filename may include wildcard characters, and the source drive may be specified at the beginning of the filename. For example:

```
!disctape,"*.*"  ENTER
```

will transfer all files from the source drive (usually drive A) to tape.

```
!disctape,"b:p*.*"  ENTER
```

will transfer all files beginning with "p", from drive B to tape.

CPC 464 users wishing to use this command should type the command name only; the <filename> parameter will then be prompted for. If ENTER is pressed in response to the prompt, then Locksmith will supply the following default value:

```
<filename>  = *.*    (i.e. all files)
```

Please note that this command may overwrite the conten[illegible] memory, so make sure you save your current program before [illegible] it.

4.7 ERA

Syntax : !era,<filename>
Function: Erase a file or group of files from disc.

This command is similar to the Amsdos command of the same name, but if only the command name itself is entered (as it must be on the CPC 464), then the filename parameter will be prompted for. The filename may include wildcard characters as usual, and the drive can be specified at the beginning of the filename. For example:

```
!era  ENTER
Enter filename: b:*.bak  ENTER
```

This will erase all files on drive B, with the file type "bak". To prevent accidental erasure the user is asked to confirm his intention before any file is erased.

4.8 HCOPY

Syntax : !hcopy,<filename>,<<sync byte>>,<<length>>
Function: Transfer a headerless tape file.

If commands such as !tapedisc or !tapetape fail to read a tape file it may be because the file was originally saved without a header. This command will read a headerless file and copy it complete with a valid header to the current output stream. Once this has been done the new copy, complete with header, can be used as normal. The parameter <filename> specifies the new name for the file, and cannot therefore, contain wildcard characters. The two other parameters are explained in more detail below, and can be ignored for the moment. If Locksmith prompts for these two parameters then just press ENTER , and Locksmith will supply sensible default values.

To use the command simply position the tape just before the headerless file, type in the command, and then follow the on screen prompts. It may be necessary to listen to the recording on the tape to find the start of the file. Once loaded the file will be tranferred to tape or disc, depending on which output stream is selected. If the file fails to load, then refer to the section below, which explains how to find the correct 'sync byte'.

CPC 464 users wishing to use this command should type the command name only; the parameters will then be prompted for.

Please note that this command may overwrite the contents of memory, so make sure you save your current program before using it.

FINDING THE CORRECT 'SYNC BYTE'
If !hcopy does not load the headerless file then it is likely that the 'sync byte' is incorrect. This is the byte stored at the beginning of a file that the computer looks for before it can load the file. The standard sync byte is &16, but in can be any value between &00 and &FF.

There is no easy way to find this byte, and a rudimentary knowledge of machine code is required. You will also need a memory lister or disassembler. You will find that the headerless file will have a machine code loader program saved just before it on the tape; it is necessary to inspect this loader and locate the following sequence of code to find the sync byte:

```
LD HL,&yyxx   21 xx yy    &xxyy=file start
LD DE,&yyxx   11 xx yy    &xxyy=file length
LD A,&xx      3E xx       &xx  =sync byte
CALL &BCA1    CD A1 BC
```

The sequence may not be in exactly the same order but it will be very similar.

4.9 HEADER

Syntax : !header,<<filename>>
Function: Display comprehensive file header information.

This command displays header information for both tape and disc filing systems. When used on a disc system, the parameter <filename> may contain the usual wildcard characters. A header for a disc file is similar to the following:

```
FILE1   .BAS  R/W  04K
File Type     :% Basic
Start Addr    :&3000
Length        :&1000
End Addr      :&4000
Exec Addr     :&3500
User Number   :00
```

A header for a tape file is similar to that above, except that Block Number is displayed instead of User Number.

CPC 464 users wishing to use this command should type the command name only; the parameter will then be prompted for. If ENTER is pressed in response to the prompt, then Locksmith will display header information for all files.

4.10 MANUAL

Syntax : !manual
Function: Set manual mode for tape to disc transfer

This command alters the way that the tape to disc transfer utility !tapedisc operates. It causes Locksmith to prompt for two things during the transfer:

1. Locksmith will prompt for a new filename when saving to disc.

2. If a file is likely to overwrite disc workspace, Locksmith will ask whether it should be relocated.

For further information please refer to the detailed description of the command !tapedisc described in section 4.17, and see also the command !auto.

4.11 FLOAD

Syntax : !pload,<filename>
Function: Load a protected Basic program.

This command loads protected Basic programs into memory, so that they may be listed and examined as normal. A protected Basic program is one that was originally saved with the letter "P" following the filename, such as:

```
save"program",P
```

The parameter <filename> cannot contain wildcard characters.

CPC 464 users wishing to use this command should type the command name only; the parameter will then be prompted for. On a tape based system you may press ENTER in response to the prompt, and Locksmith will load the first program on the tape.

Please note that this command will overwrite the contents of memory, so make sure you save your current program before using it.

4.12 PRINTON

Syntax : !printon
Function: Send all command output to printer.

Printon sends screen output from all Locksmith commands to the printer as well as the screen. This is very useful particularly if you wish to keep a record of header information, for example, that may otherwise scroll off the screen.

4.13 PRINTOFF

Syntax : !printoff
Function: Switch off printer output.

This command cancels the command !printon, and sends command output to the screen only.

4.14 REN

Syntax : !ren,<newname>,<oldname>
Function: Rename a disc file.

This command is exactly the same as the Amsdos command of the same name, but if only the command name itself is entered (as it must be on the CPC 464), then the two parameters will be prompted for. The names cannot include wildcard characters, but the drive can be specified at the beginning of the parameter <oldname>. For

example:

```
!ren  ENTER
Enter Newname: update2  ENTER
Enter Oldname: B:update1  ENTER
```

This will rename the file "update1" on drive B, to "update2".

4.15 SPEED

Syntax : !speed,<<save speed>>
Function: Reset tape saving speed.

This command takes one parameter <save speed>, which should be an integer number between 0 and 4. Each number specifies a particular save speed:

0 - 1000 baud
1 - 2000 baud
2 - 2500 baud
3 - 3000 baud
4 - 4000 baud

If the command is entered without a parameter then the default speed 0 (1000 baud) is set. The Locksmith command !status can be used at any time to find the current speed setting.

Setting the speed to a high number will save files at a faster speed, but may cause re-loading to be less reliable. However increased speeds should be reliable providing you use good quality tapes and keep your tape heads clean.

4.16 STATUS

Syntax : !status
Function: Display useful status information.

Using the status command will display something similar to the follwing:

```
Version No.       : 1.0
Input Stream      : Disc
Output Stream     : Disc
TapeDisc Mode     : Auto
User Number       : 0
Printer           : Off
Default Drive     : A
Speed Write       : 0
```

The first line gives Locksmith's version number, which should be quoted in all correspondence. Following this are the active input/output streams. These may be changed (on disc systems only) with the usual !tape and !disc commands. The next line displays the tape to disc transfer mode, and will be either Auto or Manual (see commands !auto and !manual).

The next two lines refer to disc systems only, and give the User Number and the Default Drive. These may be changes by using the AmsDos commands !user and !drive . Finally the tape save speed is displayed: this will be a number between 0 and 4, and can be altered by using the Locksmith command !speed .

4.17 TAPEDISC

Syntax : !tapedisc,<<filename>>
Function: Transfer tape files to disc.

This command will transfer single or groups of files from tape to disc. Although files will be accurately copied to disc, you may find that some of them will not run on disc without some changes being made. Section 5 of this manual gives some ideas that will help to get programs running. There is one parameter <filename>, which specifies the name of the file to transfer. It cannot contain wildcard characters.

To use the command simply position your tape just before the file that you wish to transfer, type in the command, and then follow the screen prompts. If you want to transfer all of the files on your tape, you should type the command without the filename parameter, and press ENTER in response to the prompt 'Enter Filename'. Locksmith will always transfer files to the disc in the default drive (normally drive A).

There are two problems that may occur when transferring files from tape to disc:

1. Tape filenames can be up to 16 characters long, but on disc they can only be up to 8 characters long. This means that a long tape filename may have to be shortened to make it valid.

2. The disc operating system uses some extra memory for its workspace; some tape files are quite often located in this area of memory, and if loaded could possibly cause the system to crash.

Locksmith handles these two problems in different ways depending on whether Locksmith is in Auto or Maunual mode. The default mode is Auto, but can be changed at any time by using the !manual and !auto commands.

AUTO
In this mode Locksmith will handle everything automatically without any user intervention. It will automatically make filenames valid for saving to disc, and add a small relocator to any tape files that would overwrite disc workspace.

MANUAL
In this mode Locksmith will always prompt for a new filename before saving to disc. If the tape file overwrites disc workspace, then you will be asked whether you want to add a relocator or not.

Locksmith will display all file information as it transfers files; it is best to keep a record of this information just in case the program will not run afterwards. Section 5 of this manual gives some ideas on how to get programs to run, and it is important that you know the filenames and load/execute addresses.

CPC 464 users wishing to use this command should type the command name only; the filename will then be prompted for. If ENTER is pressed in response to the prompt, then Locksmith will transfer all files from the tape.

Please note that this command will overwrite the contents of memory, so make sure you save your current program before using it.

4.18 TAPETAPE

Syntax : !tapetape,<<filename>>
Function: Transfer tape files from one tape to another.

This command will transfer a file or group of files from one tape to another. There is one parameter, <filename> which is the name of the file to transfer; it cannot contain wildcard characters.

To use the command simply position your tape just before the file that you wish to transfer, type in the command and follow the screen prompts. If you want your copy to be saved at a faster speed, then first use the Locksmith !speed command.

CPC 464 users wishing to use this command should type the command name only; the filename will then be prompted for. If ENTER is pressed in response to the prompt, then Locksmith will transfer all files from the source tape.

Please note that this command will overwrite the contents of memory, so make sure you save your current program before using it.

5. GETTING PROGRAMS TO RUN

5.1 Transfer Problems

This section deals with problems that may occur when using the tape to disc utility !tapedisc. In general Locksmith will faithfully transfer all tape files to disc except for those that are too long to fit into memory, or those that have not been saved according to the standard Amstrad tape format.

LONG PROGRAMS

The Amstrad disc system uses 1284 bytes of memory for its own workspace, which on the standard CPC 464 computer (without a disc drive) are free for program storage. This means that very long programs originally written on the standard CPC 464 may be too long to load into a system with a disc drive fitted. Where this is the case, the error message 'Memory Full' is displayed.

NON STANDARD TAPE FORMATS

Locksmith can only read tape files that were originally saved using the standard Amstrad 'SAVE' command. If Locksmith fails to read a tape file then it may be a headerless file, so try the hcopy command. If it still will not load then the file was probaby saved to a non standard format, which Locksmith cannot read.

5.2 Filename problems

One of the main problems when using !tapedisc is caused because disc filenames have two limitations that do not affect tape filenames:

1. Disc filenames can only be up to 8 characters long, while tape filenames can be 16 characters long.

2. Tape filenames can contain virtually any character, whereas disc filenames cannot contain a few special characters.

When transferring files from tape to disc, Locksmith will make all disc filenames valid in automatic mode, and will allow you to enter a new filename of your choice in manual mode. In the case of a two part program, it may be necessary for you to alter the first program manually so that it contains the correct filename to load the second program.

EXAMPLE:
You may have a program called DATABASE which loads a second file called OBJECTCODE. If you use Locksmith to transfer these files to disc, the name of the second file will be changed to OBJECTCO, so that it has only eight characters. You will have to load the first program, "DATABASE", and alter the line of the program that loads in OBJECTCODE. If DATABASE is a Basic program then somewhere it will contain a line like this:

```
310 LOAD"OBJECTCODE"
```

or 310 LOAD""
or 310 RUN"OBJECTCODE"
or 310 RUN""

Whichever the case, you must insert the shortened name, OBJECTCO, between the quotes in line 310. If the first program is a binary file then some knowledge of machine code, and the Amstrad firmware system is necessary to make the changes.

5.3 Relocation problems

In Auto mode Locksmith will relocate files from tape that occupy disc workspace at the top of memory. If the message 'File Relocated' is printed whilst using ltapedisc , then make a note of the new Start Address and the Exec Address that are printed just afterwards. There are then two simple rules to follow:

1. If the Exec Address is not zero, then the program should run correctly, and nothing more needs be done.

2. If the Exec Address is zero, then you should call the new Start Address immediately after the file has loaded.

EXAMPLE
A file called PART2 has to be relocated to the new Start Address &9800. Its Exec Address is zero, and it is loaded and run by the following small Basic program:

```
100 LOAD"PART2":CALL &A200
```

Line 100 should be changed to:

```
100 LOAD"PART2":CALL &9800:CALL &A200
```

This line will now load the file into a safe area of memory, relocate it to its original position, and then finally run it. Once a program has been relocated in this way, the program should run correctly, but disc operations will not work.